

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kate Murashige on 11/3/09.

The application has been amended as follows:

Claim 32 has been amended to read: "A method of detecting gene silencing of a target gene in a mammalian organism which method comprises the steps of: detecting in a nucleic acid extract prepared from said organism the presence as opposed to the absence of short RNA molecules (SRMs) of uniform length which are 20-30 nucleotides in length in said extract, characterizing any SRMs which are present in said extract wherein said characterizing comprises determining sequence identity or similarity with said target gene, wherein the presence of any SRMs having sequence identity or similarity with said target gene indicates silencing of said target gene in the organism, and confirming that said target gene has been silenced."

Claim 36 has been amended to read: "The method of claim 32, wherein the SRMs are short antisense RNA molecules (SARMs)."

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Claim 37 has been amended to read: "The method of claim 32, wherein the SRMs are short sense RNA molecules (SSRMs)."

Claim 41 has been amended to read: "The method of claim 32, wherein the step of characterizing any SRMs present in the extract to determine sequence identity or similarity with a target gene is performed by a process that comprises: tagging said SRMs with a marker, probing a library of genes from said organism, and identifying the genes in said library that bind to said SRMs whereby a gene that binds to said SRM is identified as said target gene which is silenced."

Claim 67 has been amended to read: "The method of claim 32, wherein the SRMs comprise both short antisense RNA molecules (SARMs) and short sense RNA molecules (SSRMs)."

Claim 68 has been amended to read: "The method of claim 32, wherein said characterizing comprises determining sequence identity with the target."

Claim 70 has been amended to read: "The method of claim 32, wherein as a result of said characterizing, sequences of SRMs are correlated with the occurrence of gene silencing in said mammalian organism."

Claim 71 has been amended to read: "The method of claim 32, wherein said SRMs are 20 nucleotides in length."

Claim 72 has been amended to read: "The method of claim 32, wherein said SRMs are 21 nucleotides in length."

Claim 73 has been amended to read: "The method of claim 32, wherein said SRMs are 22 nucleotides in length."

Claim 74 has been amended to read: "The method of claim 32, wherein said SRMs are 23 nucleotides in length."

Claim 75 has been amended to read: "The method of claim 32, wherein said SRMs are 24 nucleotides in length."

Claim 76 has been amended to read: "The method of claim 32, wherein said SRMs are 25 nucleotides in length."

Claim 77 has been amended to read: "The method of claim 32, wherein said SRMs are 26 nucleotides in length."

Claim 78 has been amended to read: "The method of claim 32, wherein said SRMs are 27 nucleotides in length."

Claim 79 has been amended to read: "The method of claim 32, wherein said SRMs are 28 nucleotides in length."

Claim 80 has been amended to read: "The method of claim 32, wherein said SRMs are 29 nucleotides in length."

Claim 81 has been amended to read: "The method of claim 32, wherein said SRMs are 30 nucleotides in length."

Claims 33-35, 66, 69, 82, and 83 have been cancelled.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY BOWMAN whose telephone number is

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(571)272-0755. The examiner can normally be reached on Monday-Thursday
6:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the
examiner's supervisor, Tracy Vivlemore can be reached on (571) 272-2914. The
fax phone number for the organization where this application or proceeding is
assigned is 571-273-8300.

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9199 (IN USA OR CANADA) or 571-272-1000.

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